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10/583,018

06/15/2006

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EXAMINER

GREEN, TRACIE Y

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/583,018 | Applicant(s) ITO, NOBUYUKI | |
| | Examiner Tracie Green | Art Unit 2879 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,5-7,17,29,30,32 and 34 is/are pending in the application.
- 4a) Of the above claim(s) 18-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3,5-7,17,29,30,32 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. Receipt is acknowledged of applicant's amendment filed 06/04/2009. Claims 18-28 withdrawn to a non-elected invention, claims 1-2, 4, 8-16, 31, 33 and 35 canceled by applicant. Claims 3, 5-7, 17, 29-30, 32, and 34 are pending and an action on the merits is as follows.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3, 5-6, 17, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Tongeren et al. (US 2002/0079832 A1) in view of Vleggaar et al. (US Patent 6,160,346).

Regarding claim 3, Van Tongeren et al. (Van Tongeren, hereafter) teaches an organic functional element (Paragraph 40, lines 1-3) comprising at least a plurality of electrodes (3 and 9) and an organic material layer (Paragraph 40, lines 1-3), wherein at least one of the electrodes is composed of a metal having a melting point of 70°C or higher to 160°C or lower (Paragraph 47, lines 14-19) (*Examiner note: prior art teaches Sn-Bi-Pb alloy with melting point of 138 degrees and Bi-SN alloy with a melting point of 100 degrees*) and wherein the metal constituting the electrode is an alloy of Bi and at least one kind of other metals (Paragraph 47, lines 14-19).

Van Tongeren is silent regarding wherein a gap made between the organic material layer and a base material having a concave part opposite to the organic material layer is filled and formed with the metal (claim 16).

In the same field of endeavor of organic devices, Vleggaar et al. teaches (Figure 1 or 2) wherein a gap (*examiner note: this gap as recited in the claim is an intermediate step and "a gap" does not exist in the final product, since this is a device claim it is the final structure and not the intermediate portions which are given patentable weight; as such "a gap" as presented by the applicant has not been afforded patentable weight.*) made between the organic material layer (4) and a base material (8) having a concave part (8, 9) opposite to the organic material layer (4) is filled and formed with the metal (5, 9) and wherein this configuration is to provide an EL device which is compact and robust under normal production and operating conditions, and which exhibits a satisfactory resistance to mechanical and varying thermal loads (Column 2, lines 15-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the organic function element of Van Tongeren wherein a gap made between the organic material layer and a base material having a concave part opposite to the organic material layer is filled and formed with the metal in order to provide is to provide an EL device which is compact and robust under normal production and operating conditions, and which exhibits a satisfactory resistance to mechanical and varying thermal loads as taught by Vleggaar et al.

Art Unit: 2879

Regarding claim 5, Van Tongeren teaches wherein a Bi component in the metal constituting the electrode is greater than that of at least one kind of other metals (Paragraph 47, lines 14-19) (*examiner note: prior art reveals SN-Bi-PB alloy wherein Bi content > Pb content*)

Regarding claim 6, Van Tongeren teaches wherein the metal constituting the electrode is an alloy composed of Bi and one, two, three, four or five kinds of metals selected from a group composed of Sn, Pb, Cd, Sb and In. (Paragraph 47, lines 14-19) (*examiner note: prior art reveals SN-Bi-PB alloy*)

Regarding claim 17, Van Tongeren is silent regarding wherein the gap has one or more opening parts, and the opening parts are sealed with a hardened metal (claim 17).

In the same field of endeavor of organic devices, Vleggaar et al. teaches (Figure 1 or 2) wherein the gap (Figure 2, 34) has one or more opening parts, and the opening parts are sealed with a hardened metal (29, 33) in order to provide is to provide an EL device which is compact and robust under normal production and operating conditions, and which exhibits a satisfactory resistance to mechanical and varying thermal loads (Column 2, lines 15-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the organic function element of Van Tongeren wherein the gap has one or more opening parts, and the opening parts are sealed with a hardened metal in order to provide is to provide an EL device which is compact and robust under normal production and operating conditions, and which exhibits a

Art Unit: 2879

satisfactory resistance to mechanical and varying thermal loads as taught by Vleggaar et al.

Regarding claim 29, Van Tongeren teaches wherein the organic functional element is an organic EL element (Paragraph 29 and Paragraph 32)

Regarding claim 30, Van Tongeren teaches wherein the electrode is a cathode (Paragraph 40, lines 1-5 and Paragraph 42, lines 1-5)

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Tongeren et al. (US 2002/0079832 A1) in view of Vleggaar et al. (US Patent 6,160,346) and in further view of Takako (Japanese Patent 2002-237382, machine translation).

Van Tongeren as modified by Vleggaar et al. teaches the organic functional element set forth above (see rejection claim 3). Van Tongeren teaches wherein the metal constituting the electrode is an alloy of Sn and Bi (Paragraph 47, lines 17-19) Van Tongeren as modified by Vleggaar et al. is silent regarding the Sn component is greater than a Bi component.

In the same field of endeavor of organic devices, Takako teaches the Sn component is greater than a Bi component (Table 1, lines 8-10) in order to provide a device with a shorten production time and improve manufacturing thus lowering the cost (Paragraph 14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the organic function element of Van Tongeren wherein the Sn component is greater than a Bi component in order to provide a device

Art Unit: 2879

with a shorten production time and improve manufacturing thus lowering the cost as taught by Takao.

5. Claims 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tongeren et al. (US 2002/0079832 A1) in view of Vleggaar et al. (US Patent 6,160,346) and in further view of Hosokawa (US 2001/0011783 A1).

Regarding claims 32 and 34, Van Tongeren teaches the organic functional element set forth above (see rejections claim 3) above. Van Tongeren as modified by Vleggaar et al. is silent regarding wherein the organic functional element is an organic semiconductor element (claim 32); and wherein the organic functional element is an organic TFT element (claim 34).

In the same field of endeavor of organic devices, Hosokawa teaches (Figures 7 or 8) wherein the organic functional element is an organic semiconductor element (10, 14 and Paragraph 32); and wherein the organic functional element is an organic TFT element (10, 14 and Paragraph 71) in order to provide a device with a reduction in the current density thus leading to prolonged operation (Paragraph 34).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the organic function element of Van Tongeren wherein the organic functional element is an organic semiconductor element; and wherein the organic functional element is an organic TFT element in order to provide a device with a reduction in the current density thus leading to prolonged operation as taught by Hosokawa.

Response to Arguments

Art Unit: 2879

6. Applicant's arguments filed 01/26/2010 have been fully considered but they are not persuasive. Specifically, the applicant argues that the Vleggaar et al. does not teach the limitation "a gap made between the organic material layer and a base material having a concave part opposite to the organic material layer is filled and formed with the metal" is not taught by Vleggaar et al. because as stated on page 6 of remarks "In the present claimed invention, the "base material having a concave part" denotes to form the gap by arranging the base material having a pre-forming a concave part opposite to the organic material layer. Further, the organic functional element of the present claimed invention is formed by filling a metal having a low melting point the gap."; therefore Vleggaar et al. does not discuss pre-forming a gap, therefore a gap cannot exist between the organic material and the base material being filled by a metal (summary of applicant's conclusion on page 7 of remarks).

The examiner respectfully disagrees with the applicant. First the applicant is attempting to argue the method by which the device was made. Applicant's attention is drawn to office action dated 1/05/2009 in which the process claims were withdrawn from consideration to a non-elected invention because the applicant has claimed a device, thus arguing the way applicant's had made a device and the secondary reference has a device is only applicable if the process of making results in a structural different. This is not the case the claims that are of current record for the reasons discussed below. .

In looking at the secondary reference, Vleggaar et al. , figure 1, if 5 and 9 were not present a "gap" would exist thus satisfying the limitation "a gap made between the organic material layer and a base material having a concave part opposite to the

Art Unit: 2879

organic material layer". Secondly the portion of the claim "filled and formed the metal", layers 5 and 9, fill the gap and form metal layers. To the applicant's suggestion that the gap is not pre-formed, thus a gap cannot exist in the Vleggaar et al. reference the examiner again respectfully disagrees. The examiner used the definition of a gap as presented in the Merriam Webster dictionary, and did not recognize any special definition for the term gap in the disclosure. Furthermore, as stated above, and again here, this gap as recited in the claim is an intermediate step and "a gap" does not exist in the final product, since this is a device claim it is the final structure and not the intermediate portions which are given patentable weight; as such "a gap" as presented by the applicant has not been afforded patentable weight. All arguments having been addressed, the way the applicant has claimed the present invention is rendered obvious.

The applicant is further reminded that it is the product and not the recited process or non-recited process that is covered by the claim. Further, patentability of a claim to a product does not rest merely on the difference in the method by which the product is made. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process. The examiner believes all arguments have been addressed, rejection of remaining claims are the same.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2879

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tracie Green whose telephone number is (571)270-3104. The examiner can normally be reached on Mon-Thurs 7:00am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Tracie Green/
Examiner, Art Unit 2879

/Sikha Roy/
Primary Examiner, Art Unit 2879